2010 Military Health System Conference

Healthcare Informatics

Management of Information as a Corporate Asset

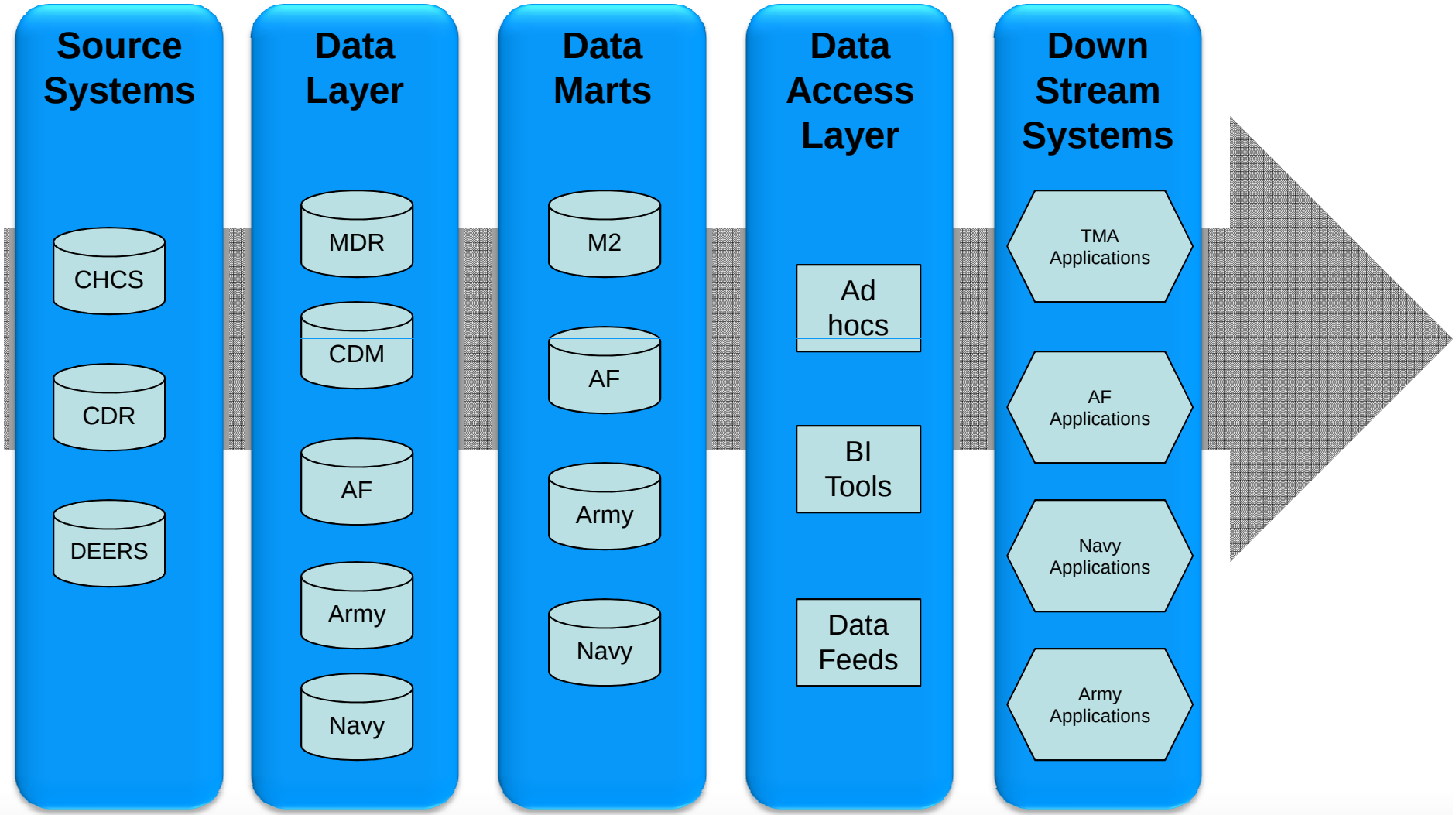
Sharing Knowledge: Achieving Breakthrough Performance

Col (s) Albert Bonnema

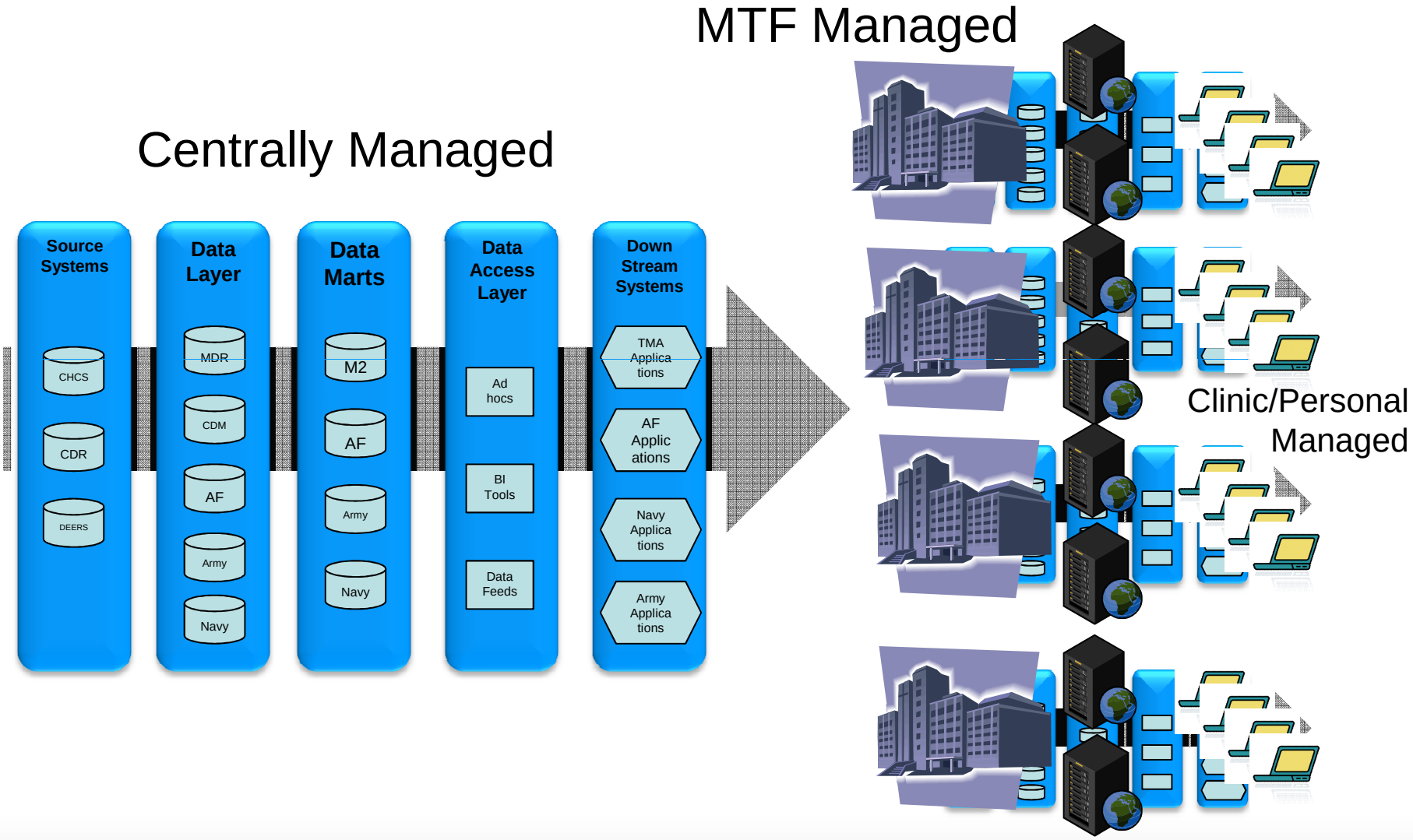
January 26, 2010

AFMSA/SG6 AFMS Office of the CIO

Information Architecture “Ideal”



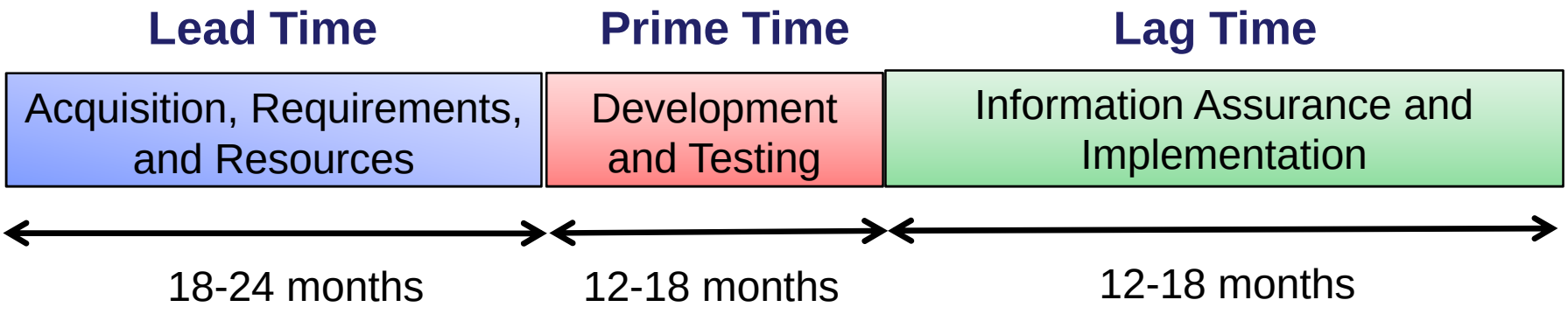
Information Architecture “Reality”



Pressure for Change

- Reorganization
- Data Consolidation
- Application Consolidation
- Enterprise Architecture
- Trained Informatics Workforce
- Information Assurance and HIPAA
- Acquisition, Requirement, & Lifecycle Mgmt

Pressure for Deliverables

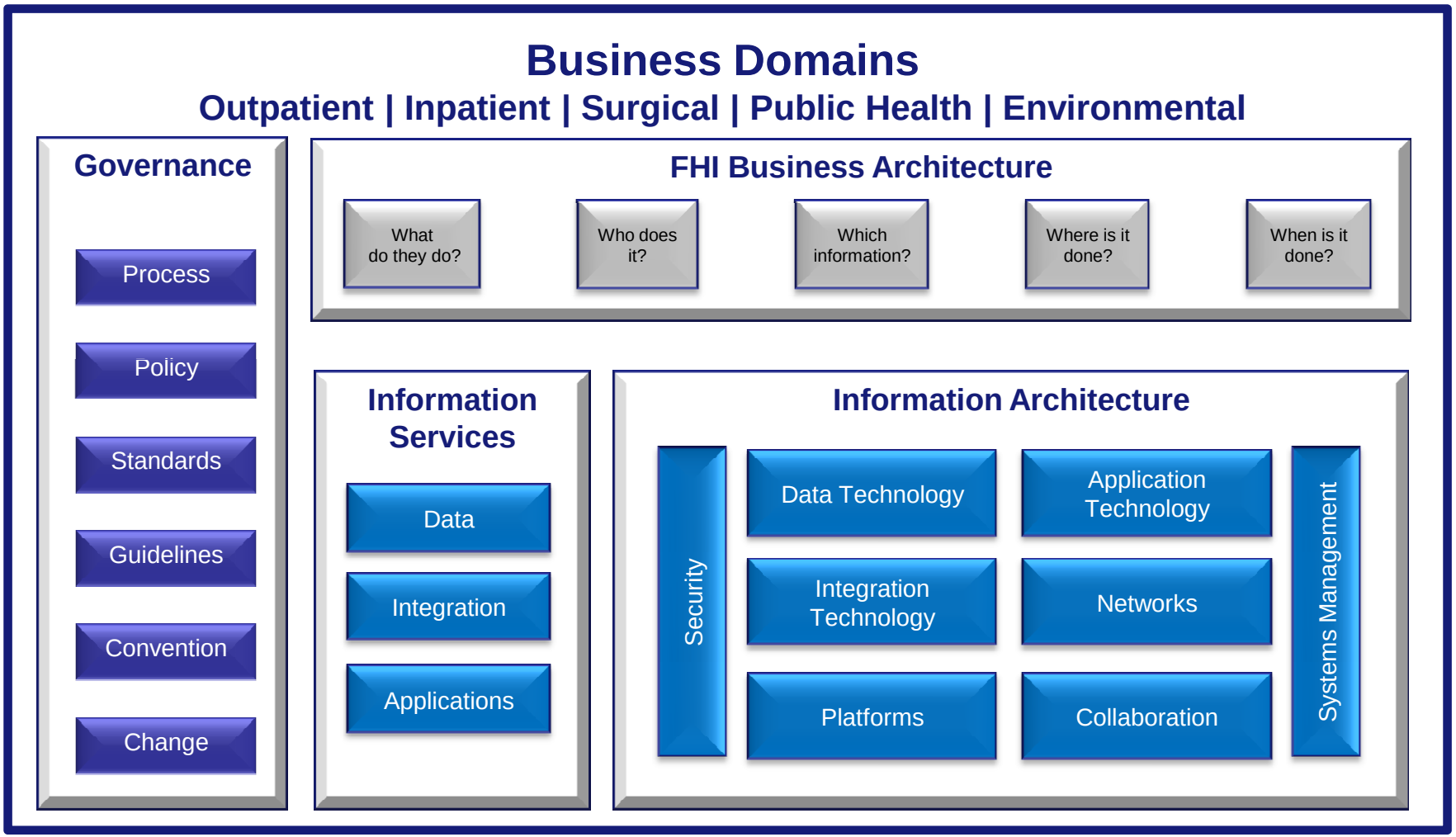


Total = 3 to 5 Years

A multitude of policy and process 'checks and balances'

Mastering paperwork is a pre-requisite to successful IM/IT operations

Pressure for Requirements



Pressure for Transparency

- Critical business, clinical, and readiness logic in applications, ad hocs, and custom code
- Leadership success is dependent on having a “data guru”
- Different measurement methods, reports, and business processes
- “Data Quality” = default defense on metrics
- Clinical Informaticians educated by “accident”

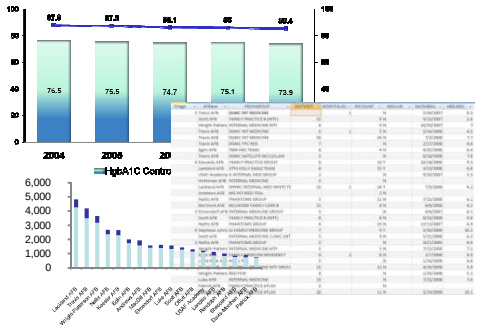
Reorganization: Define the Mission

Mission Capabilities

Data Warehouse

Analytical

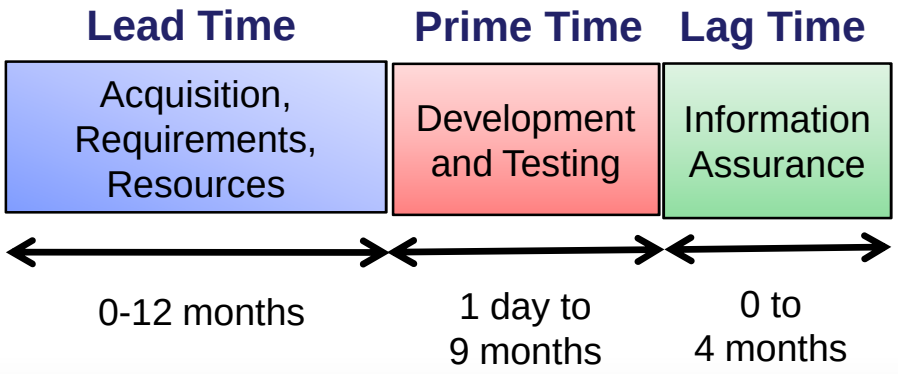
Reporting Services



Process Improvement

Adopt Two Standard Integrated Platforms

1. An enterprise data warehouse
2. A dynamic reporting service



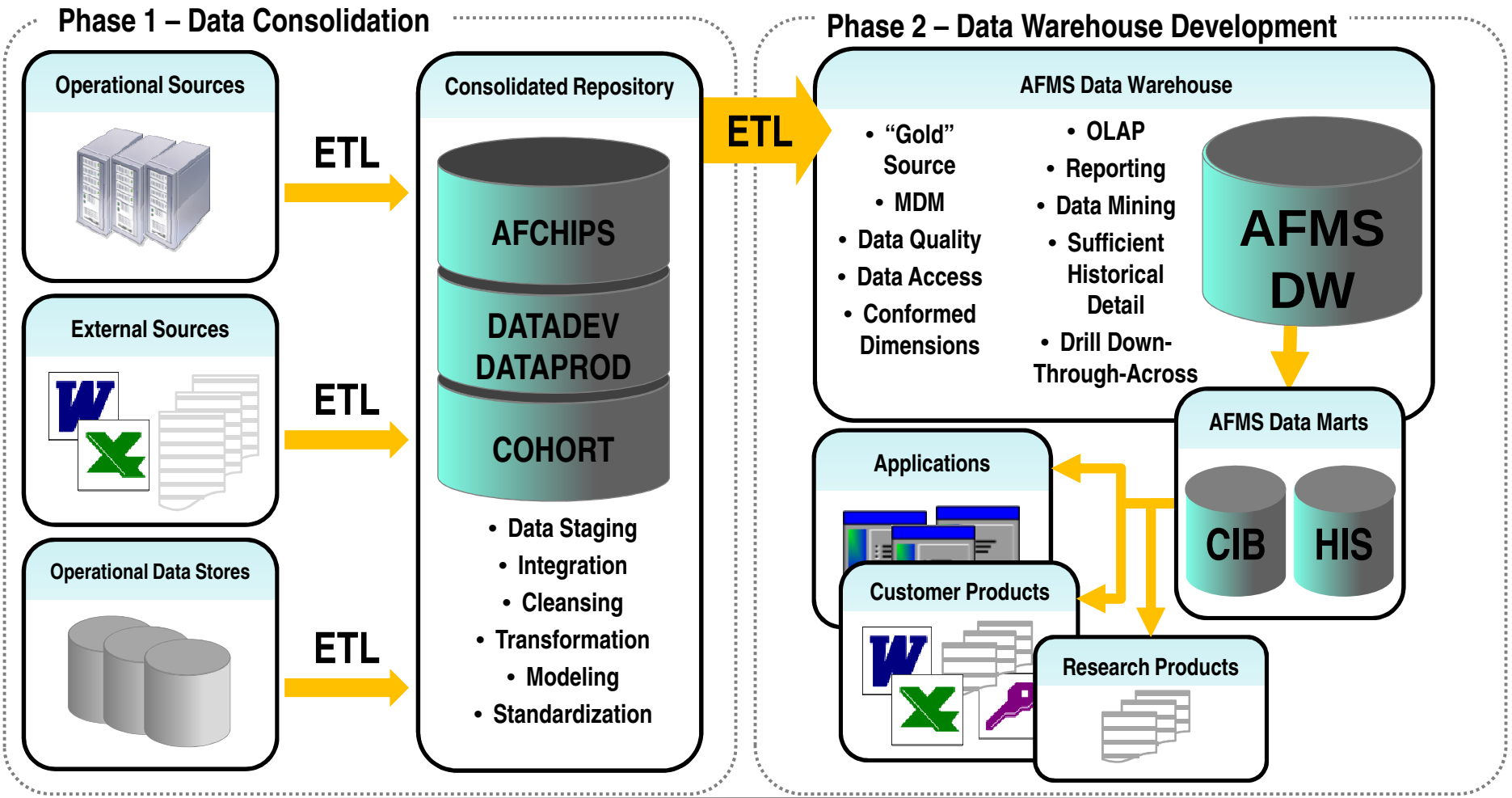
Healthcare Informatics Services

- AF Medical Readiness –
  - Preventive Health Assessment, Immunizations, Health Assessment, Deployment Surveys, Fitness, Health Promotion, DLC, Occ Med, Dental
- MHS Clinical Quality –
  - MHS Pop Health Portal, Patient Safety Measures, CMS Mortality Measures, Personalized Medicine, Special Studies

Healthcare Informatics Services

- AF Business and Practice Management
  - Medical Home, Business Planning, Referral Management, Data Quality, MEPRS, VA Catchment, Commander Reports and Dashboards
- Products and Tools
  - Data Warehouse, Decision Support Service, Information/Data Feeds, Push Reports, Patient Registries, Reporting Applications, & Systems at 84 sites including AF GRD/RES

Data Consolidation



Data Consolidation Impact

Person

DEERS
Tricare Enrollment
Military Personnel
Civilian Personnel
Trainees
Providers and NPI

Service Event

Appointments
Hospitalizations
Laboratory
Radiology
Pharmacy
Enrollment
Lab, Rad, Rx Orders
Referrals
Allergies
Immunizations
MEPRS
Pathology

Occupational

Individual Medical Readiness
Disability
Eye Glass Rx
Dental
Deployments

Agreements for Environmental Exposures
Safety Center

Civilian Network

Professional Claims
Institutional Claims
VA Catchment
Soc Security Death

Health Behavior and Risks

Self-Reported Health Assessment (BRFSS)
Fitness
Weight/BMI
Deployment Surveys

AHLTA

Vital Signs
Wellness Reminders
Historical Procedures

Healthcare Admin

Business Planning
Access to Care
EGL
P4P
MHS Balanced Scorecard

Measures

HEDIS-17
AHRQ Patient Safety QI
AHRQ Inpatient QI
AHRQ Pediatric QI
AHRQ Prevention QI
Framingham CRF
Public Health Reportable Events
CMS Mortality Measures
PTSD Surveillance
Asthma Outcomes

Patient Registries

~20 different disease and/or health service registries

*** Red = Real-time**

Data Consolidation Impact

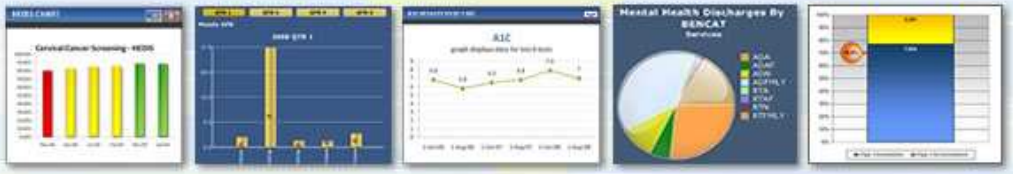
	2007	2010
O&M	~$10M	~$3.5M
RDT&E & Congressional	~$3.0M	$2.4M
Hardware	5 sites & >25 racks	2 sites & ~14 racks
Informaticians/Analyst	7 in 2 groups	25 in 7 groups
Management	3 organizations	1 organizations
Data Access Control	Ad lib	Mission-Specific
Training	Ad lib/OTJ	No trng=No access
Tools	PC-based	Server-based
Sys Admin & DbAs	No standards	Limited Access and 70% Certified
Strategy & Collaboration	Task-Oriented	Data Marts – Experience of Care, Population Health, Medical Readiness, and Per Member Cost

Application Consolidation

- Over 20 applications within our “portfolio”
  - Users: 5 to 15,000
  - DIACAP costs $150K to $800K for paperwork and necessary modernization
  - All applications older than 5 years old
- Application Capabilities
  - Registries – Display a cohort with data entry
  - Reporting – Display source system information
  - Surveys – Collect data for aggregation

Consolidated Reporting Service

- CarePoint Suite
  - A web-based platform connecting:
    - Services, TMA, and MCSC
    - Senior Leadership to Clinic
  - Security model allowing PHI and dynamic, rapid dissemination of information
  - Registry, reporting, and survey services
  - Integrates with DW, MS Office, and BI Tools
  - Allow collaboration and customization
  - “Applets” replace applications



Welcome to CarePoint!

CarePoint provides access to various DoD healthcare applications. Each application you wish to use will have a different registration process, but once you are initially granted access to CarePoint and the individual applications within, you will be able to seamlessly navigate from one application to the other with a single Common Access Card (CAC) login. You will no longer be required to remember different user names and passowords.

Before you can continue, you must request access through the CarePoint administrator. To begin, click the Request Access link below.

REQUEST ACCESS

CarePoint Help Desk:
helpdesk@carepoint.mil
DSN 555-5555
COM 555-555-5555

Current User: LtCol Patrick at the 72nd MEDICAL GROUP (0096 Tinker AFB)

CarePoint

Operational | Clinical | Business | Resources | Administration

MY CAREPOINT APPLICATIONS

MHSPHP
Military Health System Population Health Portal

ASIMS

SUAT

CRAM

ANNOUNCEMENTS

- BDQAS is now available on CarePoint.

  BDQAS is the Biometric Data Quality Assurance System. It provides users access to policies / guidance's and a comprehensive set of analysis of performance workload metrics. These tools can be used to aid Data Quality Mangers, PLMs, other managers, and MTF commanders in the ongoing mission of improving data quality and the health of our population.

OTHER APPLICATIONS YOU MIGHT FIND USEFUL

BDQAS
Biometric Data Quality Assurance System

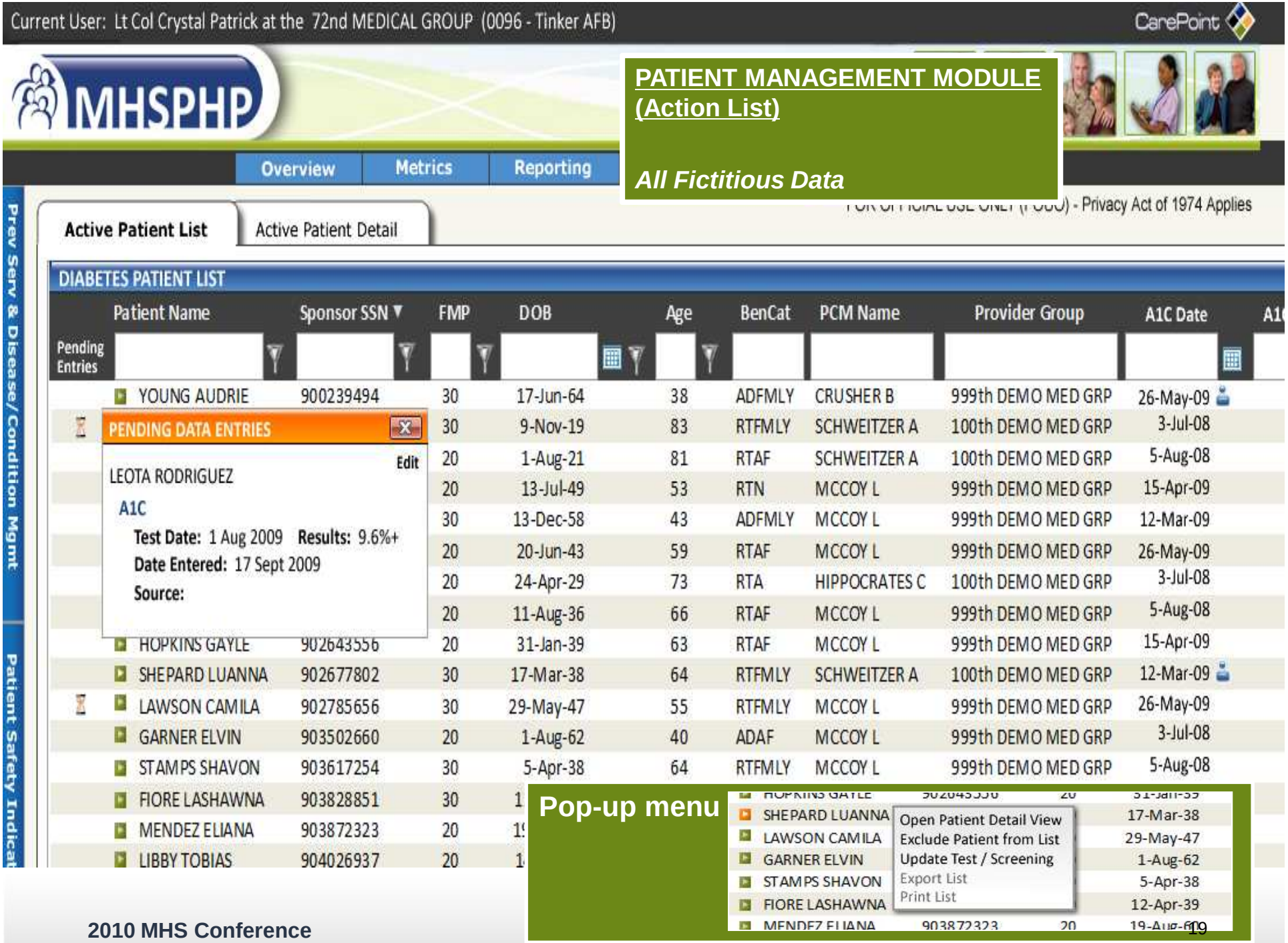
WEBHA
Air Force Web-based Health Assessment

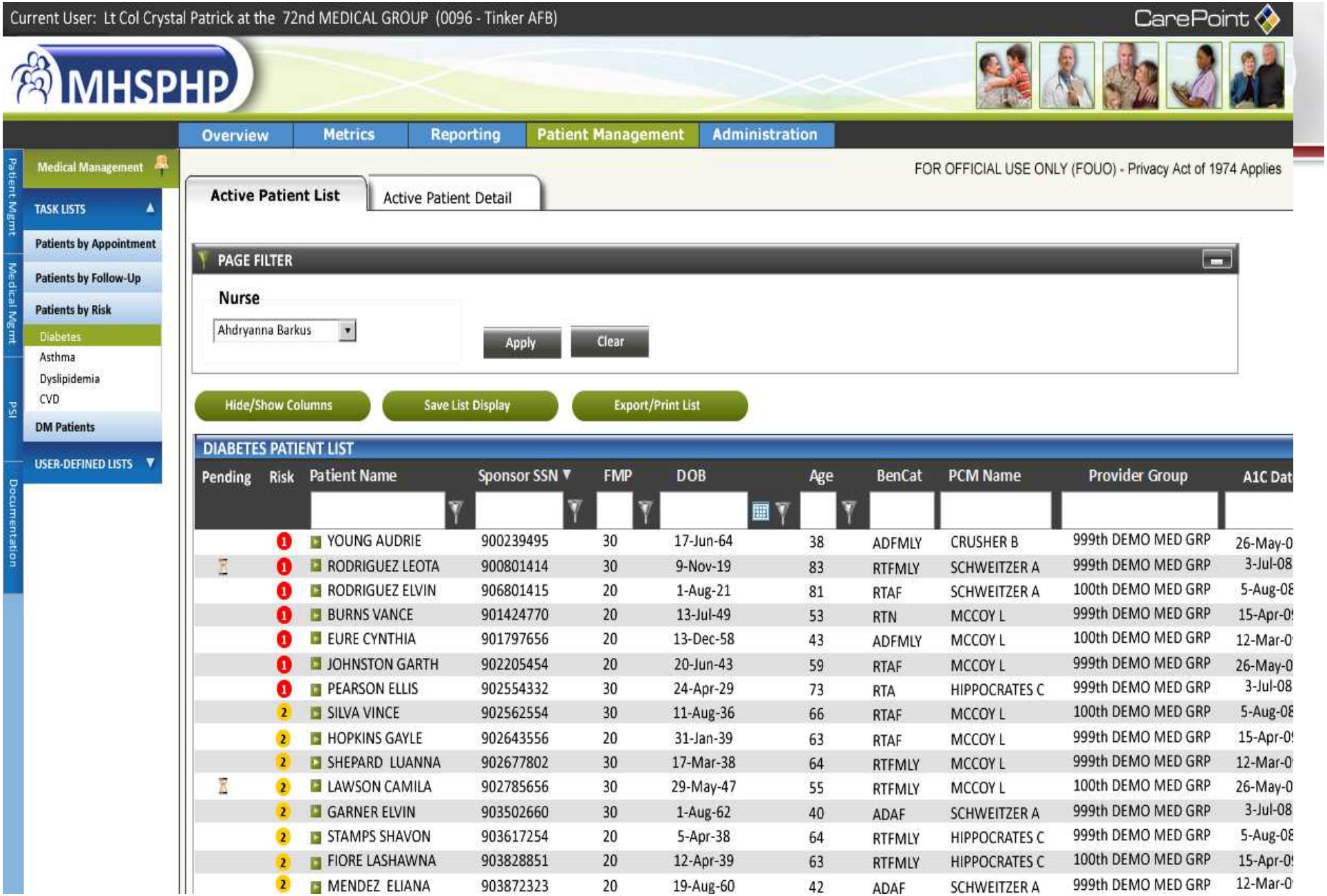
CODE AUDIT REVIEW SYSTEM
CARS

Contact Us | FAQs | Privacy Policy | Help

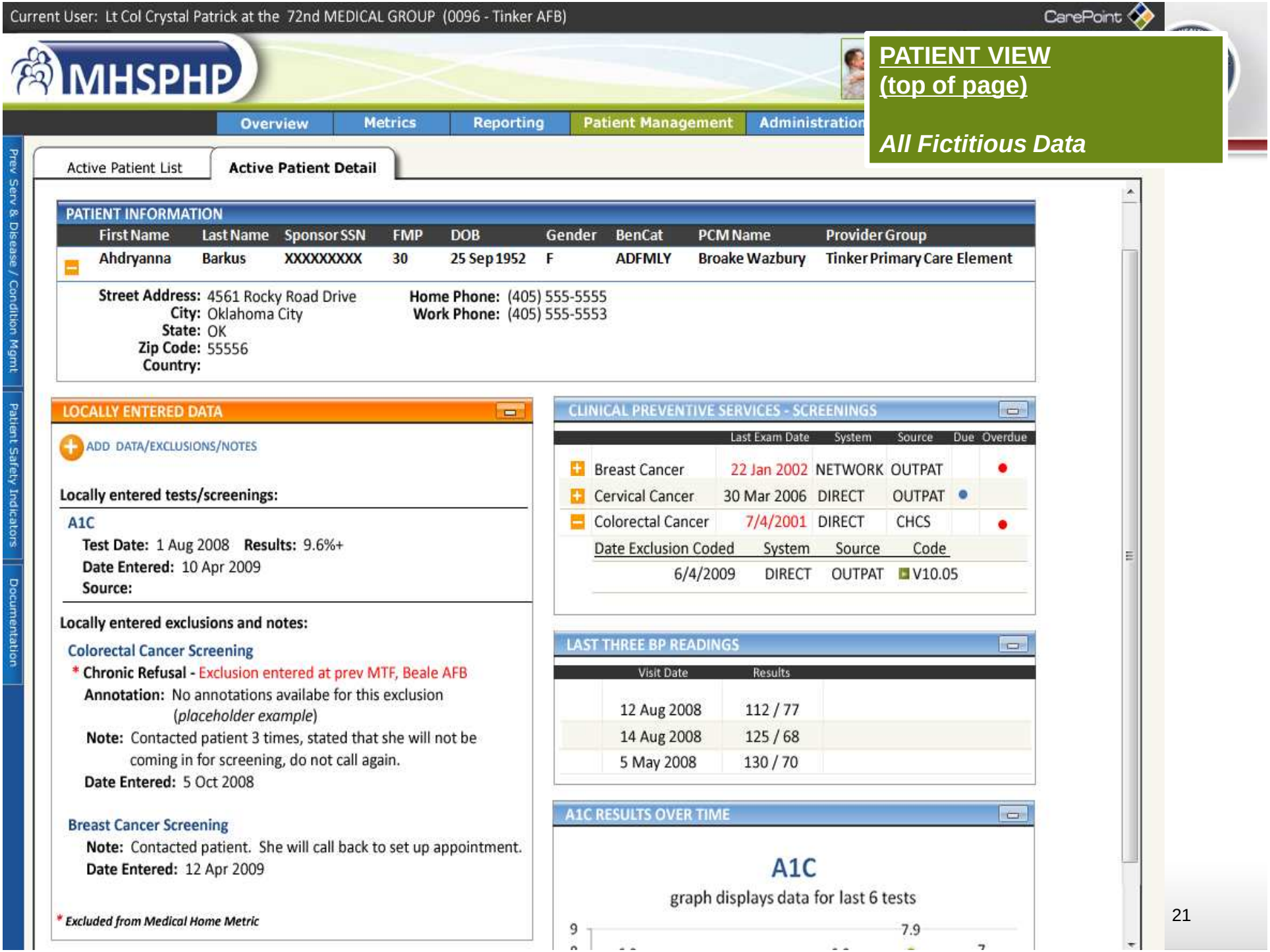
AFMS Disease Management

- 1.16 Million AFMS Enrollees
  - 18,377 with Acute MI, CABG, or PTCA
    - 2,656 have an LDL >100 mg/dl and 5,697 have no LDL in 1 yr
  - 10,495 prescribed Antidepressant Meds in last year
    - 7,411 completed 12 wks of tx and 4,917 completed 6 months
  - 43,300 have Diabetes Mellitus
    - 5,152 have no HgbA1C in last year
  - 53,502 diagnosed with Recurrent Low Back Pain in the last year
  - 46,569 diagnosed with Depression in the last year
  - 108,100 diagnosed with Hypertension
  - 13,226 diagnosed with COPD


Current User: Lt Col Crystal Patrick at the 72nd MEDICAL GROUP (0096 - Tinker AFB)
CarePoint
MHSPHP
PATIENT MANAGEMENT MODULE (Action List)
All Fictitious Data
Overview
Metrics
Reporting
Active Patient List
Active Patient Detail
Privacy Act of 1974 Applies
Prev Serv & Disease/Condition Mgmt
Patient Safety Indicat
DIABETES PATIENT LIST
Patient Name
Sponsor SSN
FMP
DOB
Age
BenCat
PCM Name
Provider Group
A1C Date
Pending Entries
YOUNG AUDRIE 900239494 30 17-Jun-64 38 ADFMLY CRUSHER B 999th DEMO MED GRP 26-May-09
PENDING DATA ENTRIES
Edit
LEOTA RODRIGUEZ
A1C
Test Date: 1 Aug 2009 Results: 9.6%+
Date Entered: 17 Sept 2009
Source:
30 9-Nov-19 83 RTFMLY SCHWEITZER A 100th DEMO MED GRP 3-Jul-08
20 1-Aug-21 81 RTAF SCHWEITZER A 100th DEMO MED GRP 5-Aug-08
20 13-Jul-49 53 RTN MCCOY L 999th DEMO MED GRP 15-Apr-09
30 13-Dec-58 43 ADFMLY MCCOY L 999th DEMO MED GRP 12-Mar-09
20 20-Jun-43 59 RTAF MCCOY L 999th DEMO MED GRP 26-May-09
20 24-Apr-29 73 RTA HIPPOCRATES C 100th DEMO MED GRP 3-Jul-08
20 11-Aug-36 66 RTAF MCCOY L 999th DEMO MED GRP 5-Aug-08
HOPKINS GAYLE 902643556 20 31-Jan-39 63 RTAF MCCOY L 999th DEMO MED GRP 15-Apr-09
SHEPARD LUANNA 902677802 30 17-Mar-38 64 RTFMLY SCHWEITZER A 100th DEMO MED GRP 12-Mar-09
LAWSON CAMILA 902785656 30 29-May-47 55 RTFMLY MCCOY L 999th DEMO MED GRP 26-May-09
GARNER ELVIN 903502660 20 1-Aug-62 40 ADAF MCCOY L 999th DEMO MED GRP 3-Jul-08
STAMPS SHAVON 903617254 30 5-Apr-38 64 RTFMLY MCCOY L 999th DEMO MED GRP 5-Aug-08
FIORE LASHAWNA 903828851 30
MENDEZ ELIANA 903872323 20
LIBBY TOBIAS 904026937 20
Pop-up menu
SHEPARD LUANNA
LAWSON CAMILA
GARNER ELVIN
STAMPS SHAVON
FIORE LASHAWNA
Open Patient Detail View
Exclude Patient from List
Update Test / Screening
Export List
Print List
17-Mar-38
29-May-47
1-Aug-62
5-Apr-38
12-Apr-39

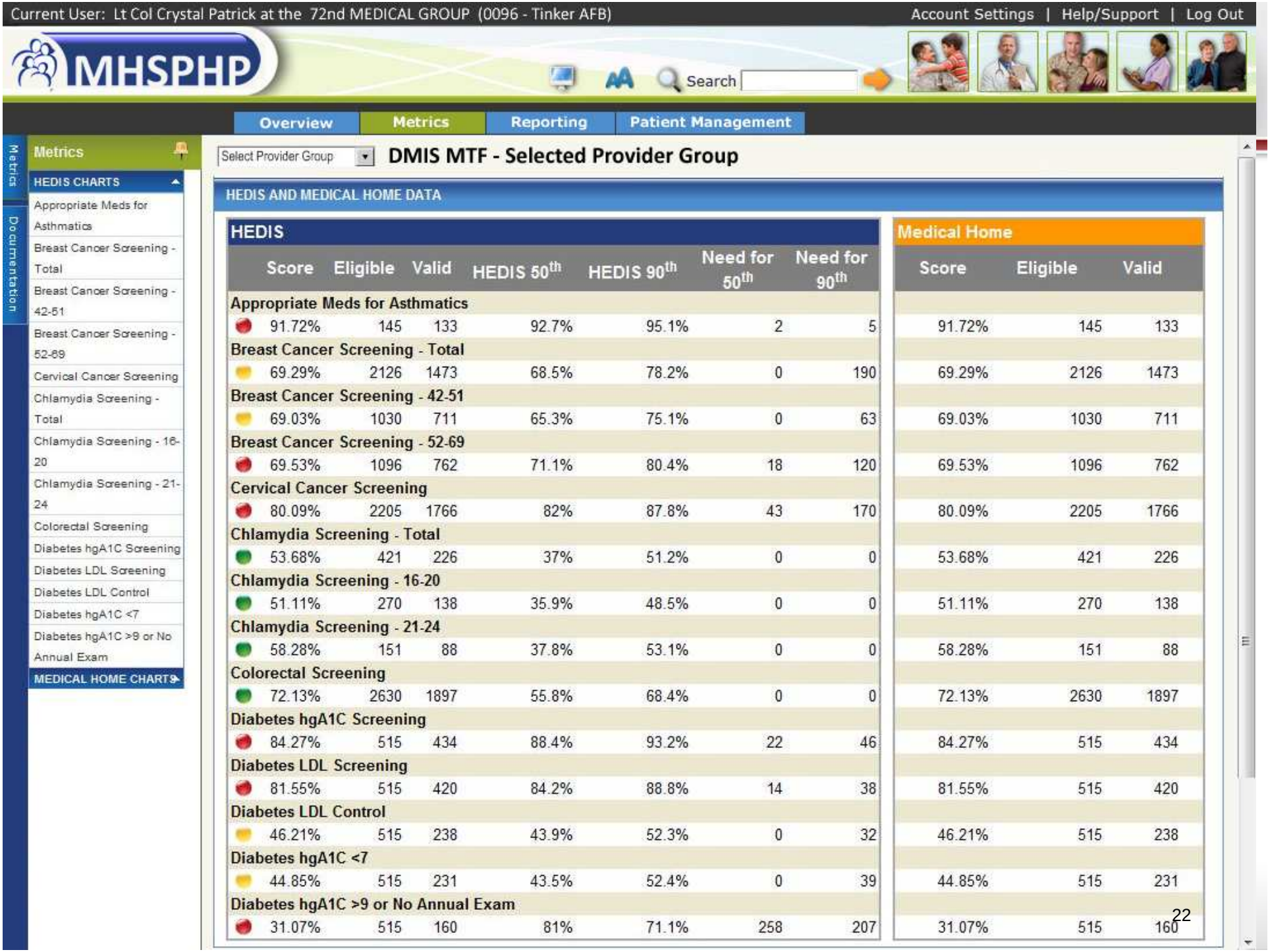


Pending	Risk	Patient Name	Sponsor SSN	FMP	DOB	Age	BenCat	PCM Name	Provider Group	A1C Dat
	1	YOUNG AUDRIE	900239495	30	17-Jun-64	38	ADFMLY	CRUSHER B	999th DEMO MED GRP	26-May-0
	1	RODRIGUEZ LEOTA	900801414	30	9-Nov-19	83	RTFMLY	SCHWEITZER A	999th DEMO MED GRP	3-Jul-08
	1	RODRIGUEZ ELVIN	906801415	20	1-Aug-21	81	RTAF	SCHWEITZER A	100th DEMO MED GRP	5-Aug-08
	1	BURNS VANCE	901424770	20	13-Jul-49	53	RTN	MCCOY L	999th DEMO MED GRP	15-Apr-0
	1	EURE CYNTHIA	901797656	20	13-Dec-58	43	ADFMLY	MCCOY L	100th DEMO MED GRP	12-Mar-0
	1	JOHNSTON GARTH	902205454	20	20-Jun-43	59	RTAF	MCCOY L	999th DEMO MED GRP	26-May-0
	1	PEARSON ELLIS	902554332	30	24-Apr-29	73	RTA	HIPPOCRATES C	999th DEMO MED GRP	3-Jul-08
	2	SILVA VINCE	902562554	30	11-Aug-36	66	RTAF	MCCOY L	100th DEMO MED GRP	5-Aug-08
	2	HOPKINS GAYLE	902643556	20	31-Jan-39	63	RTAF	MCCOY L	999th DEMO MED GRP	15-Apr-0
	2	SHEPARD LUANNA	902677802	30	17-Mar-38	64	RTFMLY	MCCOY L	999th DEMO MED GRP	12-Mar-0
	2	LAWSON CAMILA	902785656	30	29-May-47	55	RTFMLY	MCCOY L	100th DEMO MED GRP	26-May-0
	2	GARNER ELVIN	903502660	30	1-Aug-62	40	ADAF	SCHWEITZER A	999th DEMO MED GRP	3-Jul-08
	2	STAMPS SHAVON	903617254	20	5-Apr-38	64	RTFMLY	HIPPOCRATES C	999th DEMO MED GRP	5-Aug-08
	2	FIORE LASHAWNA	903828851	20	12-Apr-39	63	RTFMLY	HIPPOCRATES C	100th DEMO MED GRP	15-Apr-0
	2	MENDEZ ELIANA	903872323	20	19-Aug-60	42	ADAF	SCHWEITZER A	999th DEMO MED GRP	12-Mar-0



PATIENT VIEW
(top of page)

All Fictitious Data


Current User: Lt Col Crystal Patrick at the 72nd MEDICAL GROUP (0096 - Tinker AFB)
Account Settings | Help/Support | Log Out
MHSPHP
Search
Overview
Metrics
Reporting
Patient Management
Metrics
Documentation
Metrics
HEDIS CHARTS
Appropriate Meds for Asthmatics
Breast Cancer Screening - Total
Breast Cancer Screening - 42-51
Breast Cancer Screening - 52-69
Cervical Cancer Screening
Chlamydia Screening - Total
Chlamydia Screening - 16-20
Chlamydia Screening - 21-24
Colorectal Screening
Diabetes hgA1C Screening
Diabetes LDL Screening
Diabetes LDL Control
Diabetes hgA1C <7
Diabetes hgA1C >9 or No Annual Exam
MEDICAL HOME CHARTS
Select Provider Group
DMIS MTF - Selected Provider Group
HEDIS AND MEDICAL HOME DATA
HEDIS
Medical Home
Score Eligible Valid HEDIS 50th HEDIS 90th Need for 50th Need for 90th
Score Eligible Valid
Appropriate Meds for Asthmatics
91.72% 145 133 92.7% 95.1% 2 5 91.72% 145 133
Breast Cancer Screening - Total
69.29% 2126 1473 68.5% 78.2% 0 190 69.29% 2126 1473
Breast Cancer Screening - 42-51
69.03% 1030 711 65.3% 75.1% 0 63 69.03% 1030 711
Breast Cancer Screening - 52-69
69.53% 1096 762 71.1% 80.4% 18 120 69.53% 1096 762
Cervical Cancer Screening
80.09% 2205 1766 82% 87.8% 43 170 80.09% 2205 1766
Chlamydia Screening - Total
53.68% 421 226 37% 51.2% 0 0 53.68% 421 226
Chlamydia Screening - 16-20
51.11% 270 138 35.9% 48.5% 0 0 51.11% 270 138
Chlamydia Screening - 21-24
58.28% 151 88 37.8% 53.1% 0 0 58.28% 151 88
Colorectal Screening
72.13% 2630 1897 55.8% 68.4% 0 0 72.13% 2630 1897
Diabetes hgA1C Screening
84.27% 515 434 88.4% 93.2% 22 46 84.27% 515 434
Diabetes LDL Screening
81.55% 515 420 84.2% 88.8% 14 38 81.55% 515 420
Diabetes LDL Control
46.21% 515 238 43.9% 52.3% 0 32 46.21% 515 238
Diabetes hgA1C <7
44.85% 515 231 43.5% 52.4% 0 39 44.85% 515 231
Diabetes hgA1C >9 or No Annual Exam
31.07% 515 160 81% 71.1% 258 207 31.07% 515 160